

Table G-10. Equilibrium activity in the reactor core

Group/radionuclide	Radioactive inventory (millions of curies)	Half-life (days)
A. Noble Gases		
Krypton-85	0.23	3,919
Krypton-85m	4.8	0.187
Krypton-87	35	0.0528
Krypton-88	73	0.117
Xenon-133	167	5.29
Xenon-135	20	0.382
B. Iodines		
Iodine-131	74	8.04
Iodine-132	114	0.0952
Iodine-133	174	0.867
Iodine-134	181	0.0365
Iodine-135	164	0.274
C. Alkali metals		
Rubidium-86	0.012	18.7
Cesium-134	0.28	752
Cesium-136	0.44	13.0
Cesium-137	1.9	11,000
D. Tellurium-antimony		
Tellurium-127	3.6	0.390
Tellurium-127m	0.31	109
Tellurium-129	5.3	0.049
Tellurium-129m	4.3	33.4
Tellurium-131m	10.3	1.25
Tellurium-132	113	3.25
Antimony-127	4.1	3.80
Antimony-129	18.8	0.181
E. Akaline earths		
Strontium-89	100	52.0
Strontium-90	0.59	10,260
Strontium-91	136	0.395
Barium-140	145	12.8
F. Cobalt and noble metals		
Cobalt-58	0.0	71.3
Cobalt-60	230	1,921
Molybdenum-99	156	2.75
Technetium-99m	134	0.251
Ruthenium-103	80	39.6
Ruthenium-105	7.8	0.185
Ruthenium-106	4.5	369
Rhodium-105	38	1.48

Table G-10. Equilibrium activity in the reactor core (continued)

Group/radionuclide	Radioactive inventory (millions of curies)	Half-life (days)
<u>G. Rare earths, refractory oxides and transuranics</u>		
Yttrium-90	0.12	2.67
Yttrium-91	118	58.8
Zirconium-95	132	65.5
Zirconium-97	145	0.70
Niobium-95	39	35.1
Lanthanum-140	144	1.68
Cerium-141	135	32.5
Cerium-143	147	1.38
Cerium-144	62	284
Praseodymium-143	132	13.6
Neodymium-147	54	11.0
Neptunium-239	45	2.35
Plutonium-238	0.45	32,510
Plutonium-239	0.022	8.9×10^6
Plutonium-240	0.020	2.5×10^6
Plutonium-241	4.9	5.333
Americium-241	Trace	1.6×10^5
Curium-242	Trace	163
Curium-244	0.25	6,611